DICE ELECTRONICS

SILVERLINE

DUO

iPod | Satellite

for selected Mazda vehicles

Installation Guide/User manual

Made for iPod iPhone

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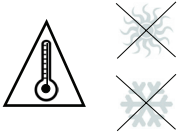
Warning and safety!

Please read these instructions carefully before proceeding. Failure to follow instructions may result in improper operation or injury. Neither DICE Electronics, LLC. nor Apple Inc., its regional offices, distributors or resellers take any responsibility for any damage or injury as a result of using the integration kit.

- Do not open, disassemble or alter the interface in any way.
- Do not insert anything into the casing.
- Do not cut or try to alter cables in any way and always use the correct connections.
- Only operate unit when stationary or ask passengers to operate it for you.
- Do not allow the Apple iPod to distract you from driving.
- Exercise good judgement and keep your eyes on the road at all times.
- Do not expose unit to extreme temperatures, humidity or shock.
- Keep the unit and iPod away from fluids.
- Keep away from children! - Interface components may contain small parts, can be broken or disassembled and components may become loose from vibration and heat. Small components and packaging materials may be a chocking hazard when handled by children.



Congratulations on your purchase!

Thank you for purchasing the DICE integration kit for iPod. Please review our user manual and installation guide before operating the unit. This interface was designed and manufactured to seamlessly integrate with your vehicle's factory entertainment system.

Product registration

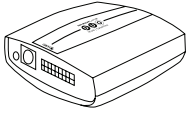
We recommend registering your DICE product so you can receive news about important firmware updates and have unlimited access to our online support system.

To register your DICE product, please complete the following steps:

1. Visit http://www.register.diceelectronics.com
2. Look up and save the serial number of the product.
3. Complete the product registration form.
4. Submit the form.
5. Save the registration/support/warranty sheet in a safe place for future reference.

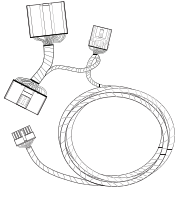
If you are unable to complete the registration via internet, please call DICE Electronics at 1-888-342-3999.

Silverline DUO kit contents

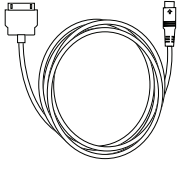


Silverline DUO module

user manual



Vehicle bus connector (SAT)



iPod docking cable

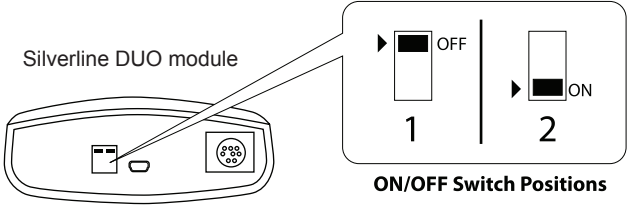
Optional accessories (sold separately):

AUX connector

IR Receiver & Remote controller

Dip switches

The configuration switches located on the Silverline DUO module are used to set various operation modes of the interface. Incorrect dip switch settings may cause the DICE interface to not work properly or to not operate at all. **Disconnect the vehicle harness from the module and cycle ignition off for 50 seconds after changing the switches!**



Dip switch setting

The dip switch positions will configure the Silverline DUO module to interface with the vehicle's radio in various emulation modes. Depending on which configuration is chosen, you will need to refer to the instructions in this manual specific to that emulation mode.

Car configuration switches	Car configuration switches
SAT Emulation	CDC Emulation
Use this setting for best user experience. Only available on SAT capable radios. **To enable usage of the SIRIUS Connect™ tuner, SAT emulation must be used.**	Use this setting when the SAT emulation is not available due to the limitation of the radio. - Radio does not display text in CDC mode - Connection of SIRIUS Connect tuner is not available in this mode.

Supported iPod models and firmware version requirements

Model	Firmware / OS Version
1G nano	1.3.1
iPod 5G	1.3
2G nano	1.1.3
iPod classic	1.1.2
3G nano	1.1.3
iPod touch	iOS 3.1.3
iPhone	iOS 3.1.3
iPhone 3G	iOS 4.2.1
4G nano	1.0.4
120 GB classic	2.0.1
2G touch	iOS 4.2.1
iPhone 3GS	iOS 4.3.5

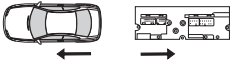
Model	Firmware / OS Version
160 GB classic	2.0.4
5G nano	1.0.2
3G touch	iOS 4.3.5
iPhone 4	iOS 4.3.5
4G touch	iOS 4.3.5
6G nano	1.0

Installation

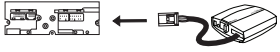
1. Verify compatibility

2. Disconnect battery

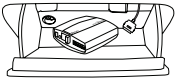
3. Remove radio from car



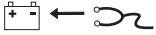
4. Install Silverline DUO cable



5. Route kit to glove box or other accessible location



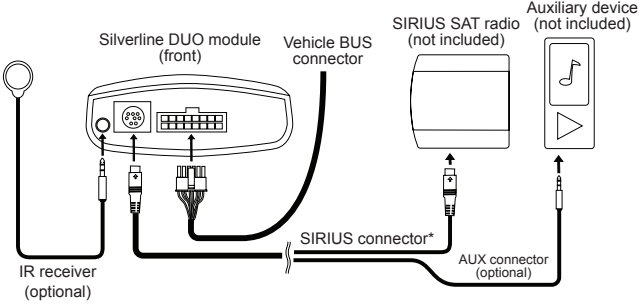
6. Connect battery & test

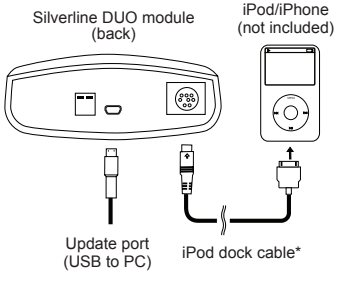


7. Complete install by re-installing radio

Some radios will enter an anti-theft security mode and will lock requiring the radio's security code to be entered to unlock it. This code can be requested from the vehicle's dealership.

Connection Diagram





* Do not connect the iPod dock cable under any circumstance to the SIRIUS module connector! Improper connection can cause permanent damage to iPod/SIRIUS module.

Attention installer! Please read the following!

DICE Electronics strongly recommends that the unit be installed in an easily accessible place!
DO NOT PLACE IT BEHIND THE RADIO!

Whether the unit is professionally or self installed, put the module where you, the end user can get to it easily in the future. (Have the installer show you where the DICE interface module is installed.)

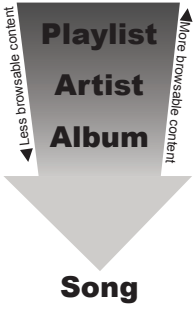
Installing the DICE module behind the radio will make it difficult to:

- -Add possible future upgrades, changing software, adding new features, improving operation;
- -Access the AUX input on the module to attach any audio device;
- -Access the DIP switches located on the module;
- -Remove the unit in case of failure.

MAKE SURE THAT THE MODULE IS IN AN ACCESSIBLE PLACE!

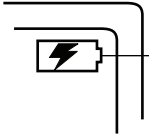
iPod content browsing

By default, the interface creates a Playlist having a name that is the same as the name of the iPod. This Playlist is the very first on the list of Playlists shown while browsing in Playlist mode. This Playlist contains all the songs on the iPod. Once a Playlist is selected an Artist may be selected within that Playlist using the Artist Mode. Albums by the selected Artist within the selected Playlist may be selected in Album Mode. “ALL ARTIST” and “ALL ALBUM” designate all available content in those categories.



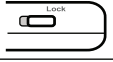
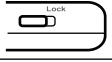
Charging

The interface automatically charges the battery of the iPod when connected and your vehicle ignition key is in the ACC/ON position.

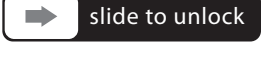


Charging may be shown by an icon that appears on the upper right corner of the iPod screen. May vary by model.

How the iPod's Hold Button Works with Silverline DUO

	iPod hold ON	iPod hold OFF
		
Radio control	✓	Limited
iPod control	×	✓
	Before connecting the iPod to the DICE module, turn the hold switch **ON** to fully control and browse the songs from the wireless remote. The iPod is locked in this state.	Before connecting the iPod to the DICE module, turn the hold switch **OFF** to fully control and browse the songs from iPod. Browsing capabilities are limited from the wireless remote.

Note: Setting the iPod's hold switch must be done prior to connecting it to the dock cable.
iPod nano 6th generation will always be in locked mode since it does not have a lock switch.



For iPod touch and iPhone, when the screen is not active (as shown on the left), the iPod/iPhone is locked (Press the power button to lock the iPhone/iPod Touch).

SAT emulation: Basic operation

Accessing the DUO as the audio source:
Much like the radio's AM/FM tuner, satellite radio or CD audio sources, the Silverline DUO is integrated to be part of the vehicle's audio system. To access the DUO source, press the SAT button on the radio.

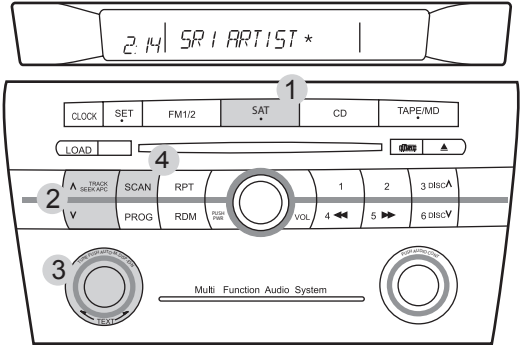
DUO source selection:
The DUO adds additional audio sources including iPod, SIRIUS Satellite Radio* and auxilliary audio input*. To cycle between these sources, use the SEEK, TRACK or TUNE buttons within the first 5 seconds of accessing the DUO as the audio source.

**These sources require additional parts/accessories/service from DICE and/or third parties.*

Note: When changing source, radio may temporarily display "UPDATING" when switching between iPod and SIRIUS Connect sources.

Silverline DUO Interface settings (within first 5 seconds of accessing the DUO as the audio source):
Press remote button 2 to set the time iPod will charge after vehicle ignition is turned OFF.
Press remote button 3 to change DUO audio gain setting.
Press remote button 4 to enable/disable scrolling text.
Press remote button 5 to set radio line display type.
Press remote button 6 to view Silverline DUO firmware version.
Press remote button 1 to apply settings and resume audio playback.

SAT Emulation: Selecting Silverline DUO as an Audio Source

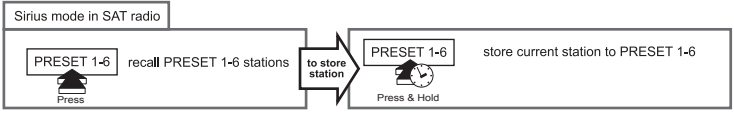


1. Radio source selector (SAT / Silverline DUO)
2. Press for Next / Previous track.
3. Press to toggle between available text fields. TURN to scroll text.
4. Press to enter/exit shuffle and repeat settings.
   - Press track up to cycle between random song, random albums, random OFF.
   - Press track down to cycle between repeat song, repeat all or repeat OFF.
   - Press SCAN to save settings and exit.

SAT Emulation: Sirius Connect™ Operation

• Stations can be saved to PRESET 1-6 by holding a preset or remote button (1-6).

• TEXT or DISP button will toggle between the text fields.



NOTE: It may be possible to tune to an invalid channel number with certain radios. Invalid channel numbers are indicated by an "INVALID" message on the radio.

• If a Sirius Connect compatible tuner is not detected, then an "AUX" message will be displayed. Please refer to the factory manual of your radio system about operating the Satellite mode.

• Go to Channel 000 to view the Sirius Tuner ID for activation. The 12 digit SID display format is in two halves as SID "123456-" followed by "-789ABC".

CDC emulation: Basic operation

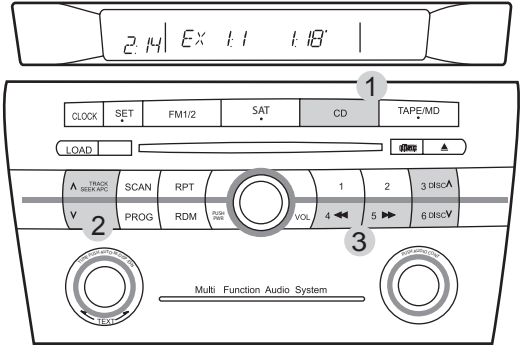
Accessing the DUO as the audio source:
Much like the radio's AM/FM tuner, satellite radio or CD audio sources, the Silverline DUO is integrated to be part of the vehicle's audio system. To access the DUO source in CDC emulation mode, press the CD button on the radio. Pressing this button repeatedly will cycle through the available sources (CD > DUO).

DUO source selection:
The DUO adds additional audio sources including iPod, SIRIUS Satellite Radio* and auxilliary audio input*. To cycle between these sources, use the SEEK, TRACK or TUNE buttons within the first 5 seconds of accessing the DUO as the audio source.

**These sources require additional parts/accessories/service from DICE and/or third parties.*

Silverline DUO Interface settings (within first 5 seconds of accessing the DUO as the audio source):
Select DISC 2 to set the time iPod will charge after vehicle ignition is turned OFF.
Select DISC 3 to change DUO audio gain setting.
Select DISC 4 to enable/disable scrolling text.
Select DISC 5 to set radio line display type.
Select DISC 6 to view Silverline DUO firmware version.
Select DISC 1 to apply settings and resume audio playback.

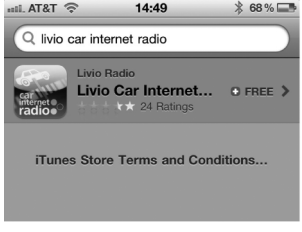
CDC Emulation: Selecting Silverline DUO as an Audio Source



1. Radio source selector (CDC / Silverline DUO)
2. Press for Next / Previous track
3. Press to FFW or RW currently playing track
4. Change iPod browsing mode

The Livio Car Internet Radio application (iPhone/iPod touch)

This DICE integration kit includes support for the Livio Car Internet Radio application. It's available on the iTunes® Store, try the FREE app and listen to hundreds of Internet-based radio programming options streamed through the 3G/ Edge or Wi-Fi connection. Download the upgraded Livio Car Internet Radio application for a fee to stream more than 45,000 AM/ FM and Internet-only radio streams from around the world.



Help is available for the Livio Radio application by calling **1-877-97-LIVIO** or going on the web to **http://support.livioradio.com**. You can also visit **http://www.livioradio.com/iphonecarhelp**. If you do not have version 2.2.0 or newer of the Livio Car Internet Radio application, please visit the App Store to download it for free.

Data connection requirements (3G/4G/WiFi)

Users must have an active wireless data connection in order to stream music from the Car Internet radio App while driving. Data connections including "3G" or "4G" through wireless carriers, or a third party wireless Internet access point connected to your mobile device thru WiFi will work. Because this app requires a data connection, it will only work on the iPhone and iPod touch.

Controlling the Livio Car Internet Radio app

The app must be active on the screen of the iPhone or iPod touch. To do so, users can simply tap the Livio icon on their device and it will load. For example, users can tap on the text area of the app to stop or play the selected stream. For additional details or further support, please visit **http://www.livioradio.com/car/**.

Next/previous TRACK buttons cycle between Livio station presets.
DISC/PRESET (1-6) buttons will select one of the first six Livio station presets.

iPhone 4, iPhone 3GS, iTouch 4th and iTouch 3rd generation devices with iOS 4 (4.3.3) offer limited basic control when an app is running in the background. Text, advisory messages or direct preset tunes therefore are not available. Message on the radio shows “LIVIO (background)” when the app is running in the background.

Please note that although iOS 4 (4.2.1) is supported on iPhone 3 and iTouch 2nd generation, applications do not run in the background. As such, loading the Livio application takes longer than on devices where the app is present in the background.

If your listening experience is interrupted by a call, under most conditions, the application will resume playback at the end of the call.

Music playback applications running on your iPhone are sent to background automatically when the home button of the phone is pressed, but the music playback itself is not stopped.

To resume playback of your iPod music library, stop Livio playback by tapping on the screen below the Livio Radio logo. An icon representing “stop” will show on the main Livio screen. Press the home button to send the application to the background.

A few seconds after this, the iPod music playback application will reinitialize itself and become active again if the iPod was locked when it was connected to the DICE kit. (This is indicated by an Accessory Connected message being shown when the iPod icon is tapped.)

If the iPod was in unlocked state when it was connected to the DICE kit, press the play button on the iPod application.

Text display from the Livio Car Internet Radio app

Text that scrolls across the radio’s screen is associated with the stream shown on the radio and displays current song or station information.

Terminate (kill) the Livio Car Internet Radio app

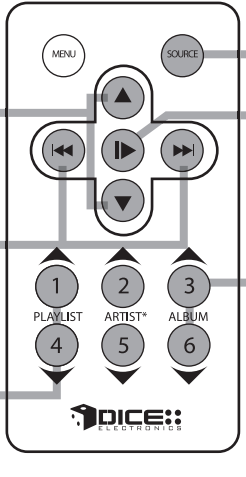
If you need to terminate (kill) the Livio application please follow the steps below:
1. Double-tap on the home button of the iPhone to bring up the list of running applications. If you don't see the Livio Car Internet Radio icon right away, swipe the screen left or right to locate it. Note: If you do not see such task bar but rather a music control popup then you have an iOS device that does not support background run of applications, therefore this section is not applicable to you.
2. Press and hold the icon of the application until a red minus icon shows.
3. Tap the red minus icon shown on top of the Livio Car Internet Radio icon.
4. This will close the application.
5. In a few seconds, the iPod music playback application should reinitialize itself and become active again. This can be verified by going back to the list of running applications and swiping the screen unit the music control section is shown. The iPod application icon next to the music control sections shows that iPod is your audio source.

Livio Car Internet Radio app settings

Many radio stations offer lower bitrates. Selecting streams with a lower bitrate will reduce data usage and may reduce stream interruptions during the drive. To adjust bitrates automatically, users can:
Go to the Setting menu of the device, select the Livio Radio settings the change the Maximum Bitrate Filter and set it to 64K. Other settings such as Buffer time and Reliability filter may also help in getting a more stable connection.

SILVERLINE DUO iPod | Satellite

Optional Remote Kit: Functions for iPod/Livio Internet Radio app



▲	**iPod:** Shuffle SONG (within a PLAYLIST) / Shuffle ALBUM / Shuffle off
▼	**iPod:** Repeat one / Repeat all / Repeat off

⏭	**iPod:** Next Track **Livio:** Next station preset
⏮	**iPod:** Previous Track **Livio:** Previous station preset

1	**iPod:** Skip to the next PLAYLIST
4	**iPod:** Skip to the previous PLAYLIST

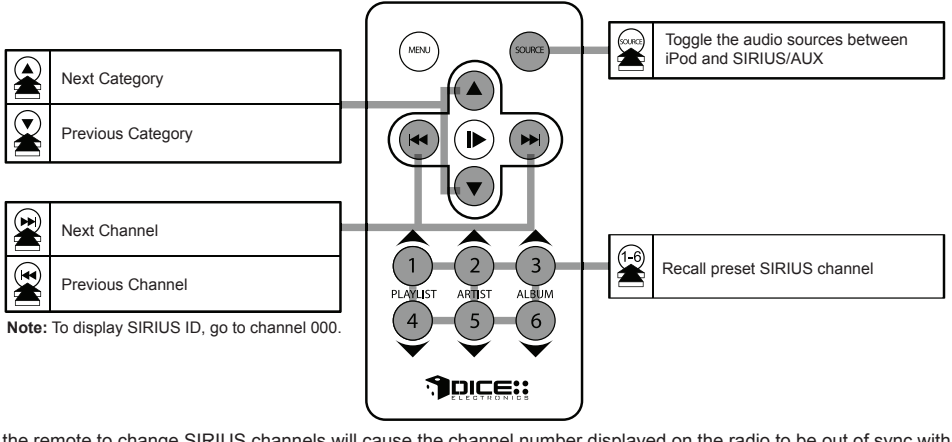
SOURCE	Toggle the audio sources between iPod and SIRIUS/AUX
⏯	Play / Pause

3	**iPod:** Skip to the next ALBUM
6	**iPod:** Skip to the previous ALBUM

Livio: Buttons 1-5 will access station presets 1-5.

* ARTIST is currently not supported

Optional Remote Kit: Wireless Remote Function for SIRIUS



Using the remote to change SIRIUS channels will cause the channel number displayed on the radio to be out of sync with the actual channel number. To synchronize channel numbers, change channels using the controls on the radio.

Troubleshooting

Problem	Solution
Text is not displaying in selected emulation.	Identify your audio system first and set switches accordingly on Silverline DUO module. Use the DISP button on radio/display to toggle text fields. CD emulation has no text display.
iPod does not charge.	Check all connections. See if iPod charges while connected to computer or wall charger. You may need to reset the iPod.
Music is distorted or sound level is too low with iPod connected.	Make sure all EQ and BASS boost options are turned off on your iPod.
Why is the interface not controlling the iPod/USB drive?	Please make sure that the USB connection is not loose. Make sure that an iPod case is not preventing the dock connector from being fully seated. Disconnect and reconnect the device. If iPod is not responding please try resetting it. USB device must also be FAT16/32 format and contain supported MP3, WMA or AAC content.
Sirius tuner can't be selected.	Ensure the cable connecting SIRIUS tuner is securely connected to the correct receptacle.

Problem	Solution
No audio from iPod source.	Reset the iPod. Verify proper connection to iPod/interface. Check for compatibility.
Why does the radio display show "EMPTY/STOP" and no music plays?	The iPod has reached the end of a playlist. Please select a new Playlist.
Cannot select the interface.	Ensure the cable connecting DUO is securely connected to the correct receptacle. Verify that the correct button is used to access the interface.
Radio/ steering wheel controls do not operate iPod.	Reset iPod and make sure the most recent iPod firmware is installed. Check vehicle user manual on how steering wheel controls work, long presses may toggle alternate function.
Why does category read "PRESELCTD"?	Playback of content selected on the iPod before connected to the interface continues until new content is selected.

Problem	Solution
Why does the message “iPod UNLOCKED” display on screen?	When the Silverline DUO is playing iPod music in UNLOCKED mode, browsing mode information isn’t available so the “iPod UNLOCKED” notification is shown. To view information associated with browsing modes, ensure the iPod’s hold button is set before connecting it to Silverline DUO.

Firmware update

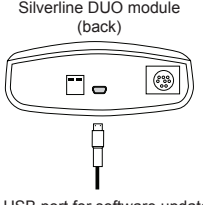
STEP 1: Disconnect the Silverline DUO module from the vehicle.

STEP 2: Download and install necessary software from www.diceelectronics.com

STEP 3: Open software to follow instructions for updating Silverline DUO unit.

STEP 4: Plug in Silverline DUO via mini USB cable and update.

STEP 5: Disconnect and reinstall the unit into the vehicle.



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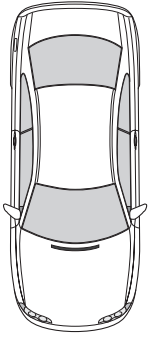
Installation notes:

Installed by:	Illustration:
Installed date:	
Other notes:	



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